

CLAIMS

WHAT IS CLAIMED IS:

1. An implantable medical device comprising:
at least two interconnected modules, each of the modules comprising a housing;
and
an overmold that at least partially encapsulates each of the housings, the overmold comprising a lead connection module for accepting an external lead.
2. The implantable medical device of claim 1, wherein at least one module comprises a control module containing electronic components.
3. The implantable medical device of claim 1, wherein the overmold comprises a first material and a second material, and the lead connection module is deployed within the first material.
4. The implantable medical device of claim 3, wherein the first material comprises a non-elastomeric material.
5. The implantable medical device of claim 1, the lead connection module comprising at least one feed-through wire to electrically couple an external lead to an electronic component within the implantable medical device.
6. The implantable medical device of claim 1, wherein the lead connection module includes a mechanical lead securing mechanism.
7. The implantable medical device of claim 6, wherein the mechanical lead securing mechanism comprises a tool-less mechanical lead securing mechanism.

8. The implantable medical device of claim 1, wherein the implantable medical device has a maximum thickness of between approximately 4 millimeters and approximately 8 millimeters.
9. An overmold for a modular implantable medical device comprising:
 - a first material configured to hold at least part of a module;
 - a second material coupled to the first material; and
 - a lead connection module configured to accept an external lead, the lead connection module being deployed within the overmold.
10. The overmold of claim 9, wherein the first material comprises a non-elastomeric material.
11. The overmold of claim 9, wherein the second material comprises an elastomeric material.
12. The overmold of claim 9, wherein the second material comprises silicone.
13. The overmold of claim 9, wherein the lead connection module is deployed within the first material.
14. The overmold of claim 9, wherein the lead connection module is configured to receive an iso-diametric external lead.